

AMENDMENTS TO THE CLAIMS

The current listing of the claims replaces all previous amendments and listings of the claims.

1. (Currently Amended) A method for ~~the~~ decontamination of oily cuttings, coming from ~~the drilling of~~ drilling oil wells, and ~~the contemporaneous~~ recovery of ~~the~~ an oily component, comprising ~~the following steps:~~

~~a. optional mixing of the cuttings with an inert material;~~

[[b.]] mixing [[of]] said cuttings with a solvent compressible to ~~the~~ a liquid state at a pressure ~~value~~ ranging from 45 to 80 bar and causing separation of an oily fraction at a pressure ranging from 30 to 60 bar, and at a temperature corresponding to the a saturation value, ~~with dissolution of the~~ to dissolve the oily fraction of the ~~cutting~~ cuttings;

~~e. removal of the liquid phase (solution)~~ removing a liquid phase including the solvent and the oily fraction from the solid phase (cutting) cuttings;

[[d.]] expansion and heating of the ~~solution leaving step (a), with the recovery of~~ liquid phase to recover the oily fraction discharged, and to recover the solvent in ~~vapour~~ a vapor phase;

[[e.]] cooling and condensation of the ~~process solvent and its recycling to step (a),~~ after possible under-cooling in the vapor phase for use in a subsequent mixing with other cuttings.

2. (Canceled)

3. (Currently Amended) The method according to ~~claims 1 and 2~~ claim 1, wherein the mixing ~~step~~ of the cuttings and the separation ~~step~~ of the oily fraction take place at a temperature close to the saturation value of the liquid phase.

4. (Currently Amended) The method according to ~~any of the claims from 1 to 3~~ claim 1, wherein the cooling and condensation of the solvent in the vapor phase occurs after under-cooling degree of the liquid phase ranges at a temperature ranging from 0 to 5° C.

5. (Currently Amended) The method according to ~~any of the claims from 1 to 4~~ claim 1, wherein the solvent is fed to ~~the~~ an extraction vessel in a ratio from 2 to 20 times by weight with respect to the cuttings during the mixing of the cuttings with the solvent.

6. (Currently Amended) The method according to ~~any of the claims from 1 to 5~~ claim 1, wherein the cutting is mixed with 10-40% by weight with respect to the total of an inert material further comprising:

mixing the cuttings with an inert material, the cuttings being 10 to 40% by weight of the inert material, prior to mixing the cuttings with the solvent.

7. (Currently Amended) The method according to ~~any of the claims from 1 to 6~~ claim 6, wherein the inert material ~~consists of~~ includes other cuttings ~~already treated and therefore partially recycled.~~

8. (Currently Amended) The method according to ~~any of the claims from 1 to 7~~ claim 1, wherein the ~~process fluid is one of the following:~~ solvent includes at least one of carbon dioxide, alkane or alkene with a number of carbon atoms lower less than or equal to 3, and light hydrofluoro carbide, a mixture of alkanes and/or alkenes and/or HFC.

9. (Currently Amended) The method according to ~~any of the claims from 1 to 8~~ claim 1, wherein ~~the moving of the process fluid is effected~~ the liquid phase is moved using a

volumetric compressor ~~situated between the~~ a separation section and ~~the~~ an accumulation tank.

10. (Currently Amended) The method according to ~~any of the claims from 1 to 8~~ claim 1, wherein ~~the moving of the process fluid is effected~~ the liquid phase is moved using a volumetric pump ~~situated between the~~ an accumulation tank and ~~the~~ an extractor vessel.

11. (Currently Amended) The method according to ~~any of the previous claims~~ claim 1, wherein the oily ~~phase extracted~~ fraction is separated by the use of one or more separators ~~on line~~.

12. (Currently Amended) The method according to claim 11, wherein at least one of ~~the separation section consists of a single separator with~~ separators is configured to provide a cyclone effect.

13. (Currently Amended) The method according to claim ~~11~~ 1, wherein ~~the separation section consists of two separators, the first with~~ the oily phase is separated by a first separator configured to remove the solvent by an inertial impact, the second with and a second separator configured to remove the solvent by a cyclone effect.

14. (Currently Amended) The method according to ~~claims 11-13~~ claim 11, wherein a filter ~~for separating the entrained~~ configured to separate liquid ~~from the solvent~~ is situated down-stream of at least one of the separation section separators.

15. (Currently Amended) The method according to claim 9, wherein ~~the~~ a phase passage of the ~~process-fluid~~ solvent take place by an energy exchange between ~~the~~ a heat of vaporization ~~heat~~ and ~~the~~ a heat of condensation heat.

16. (New) The method according to claim 1, further comprising:  
mixing the cuttings with an inert material prior to mixing the cuttings with the solvent.